

=====

Sequence Listing was accepted.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: Fri Sep 14 16:21:40 EDT 2007

=====

Application No: 10583301 Version No: 1.0

Input Set:

Output Set:

Started: 2007-09-04 13:49:57.358
Finished: 2007-09-04 13:49:58.247
Elapsed: 0 hr(s) 0 min(s) 0 sec(s) 889 ms
Total Warnings: 12
Total Errors: 2
No. of SeqIDs Defined: 12
Actual SeqID Count: 12

Error code	Error Description
W 402	Undefined organism found in <213> in SEQ ID (1)
W 402	Undefined organism found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
E 257	Invalid sequence data feature in <221> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
E 257	Invalid sequence data feature in <221> in SEQ ID (12)

SEQUENCE LISTING

<110> Shah, Salehuzzaman
Weselake, Randall
Alberta Research Council Inc.

<120> Transgenic Plants With Reduced Level of Saturated Fatty Acid and
Methods for Making Them

<130> 080426-000000US

<140> 10583301

<141> 2007-09-04

<150> CA 2,450,000

<151> 2003-12-18

<150> WO PCT/CA04/02156

<151> 2004-12-17

<160> 12

<170> PatentIn version 3.3

<210> 1

<211> 837

<212> DNA

<213> Synechococcus elongatus ATCC #33912, deposited as
Anacystis nidulans

<220>

<223> delta-9 desaturase (des9, DSG), fatty acyl-CoA desaturase,
fatty acid desaturase

<400> 1

atgacccttg ctatccgacc caagcttgcc ttcaactggc cgaccgccct gttcatggtc	60
gccattcaca ttggagcact gttagcgttc ctgccggcca actttaactg gcccgctgtg	120
ggcgtgatgg ttgcgctgta ttacattacc ggttggtttg gcatcaccct aggctggcac	180
cggctaattt cgcaccgtag ctttgaagtt cccaaatggc tggaatacgt gctggtgttc	240
tgtggcacct tggccatgca gcacggcccc atcgaatgga tcggtctgca ccgccaccat	300
cacctccact ctgaccaaga tgtcgatcac cacgactcca acaagggttt cctctggagt	360
cacttcctgt ggatgatcta cgaaattccg gcccgtagcg aagtagacaa gttcacgcgc	420
gatatcgctg gcgaccctgt ctatcgcttc ttttaacaaat atttcttcgg tgtccaagtc	480
ctactggggg tactttttgta cgcctggggc gaggcttggg ttggcaatgg ctggtctttc	540
gtcgtttggg ggatcttcgc ccgcttggtg gtggtctacc acgtcacttg gctggtgaac	600
agtgctaccc acaagtttgg ctaccgctcc catgagtctg gcgaccagtc caccaactgc	660

tgggtgggttg cccttctggc ctttggtgaa ggctggcaca acaaccacca cgcctaccag 720
 tactcggcac gtcatggcct gcagtgggtg gaatttgact tgacttgggt gatcatctgc 780
 ggctgaaga aggtgggtct ggctcgcaag atcaaagtgg cgtctccaaa caactaa 837

<210> 2

<211> 278

<212> PRT

<213> Synechococcus elongatus ATCC #33912, deposited as
 Anacystis nidulans

<220>

<223> delta-9 desaturase (des9, DSG), fatty acyl-CoA desaturase,
 fatty acid desaturase

<400> 2

Met Thr Leu Ala Ile Arg Pro Lys Leu Ala Phe Asn Trp Pro Thr Ala
 1 5 10 15

Leu Phe Met Val Ala Ile His Ile Gly Ala Leu Leu Ala Phe Leu Pro
 20 25 30

Ala Asn Phe Asn Trp Pro Ala Val Gly Val Met Val Ala Leu Tyr Tyr
 35 40 45

Ile Thr Gly Cys Phe Gly Ile Thr Leu Gly Trp His Arg Leu Ile Ser
 50 55 60

His Arg Ser Phe Glu Val Pro Lys Trp Leu Glu Tyr Val Leu Val Phe
 65 70 75 80

Cys Gly Thr Leu Ala Met Gln His Gly Pro Ile Glu Trp Ile Gly Leu
 85 90 95

His Arg His His His Leu His Ser Asp Gln Asp Val Asp His His Asp
 100 105 110

Ser Asn Lys Gly Phe Leu Trp Ser His Phe Leu Trp Met Ile Tyr Glu
 115 120 125

Ile Pro Ala Arg Thr Glu Val Asp Lys Phe Thr Arg Asp Ile Ala Gly
 130 135 140

Asp Pro Val Tyr Arg Phe Phe Asn Lys Tyr Phe Phe Gly Val Gln Val

145 150 155 160

Leu Leu Gly Val Leu Leu Tyr Ala Trp Gly Glu Ala Trp Val Gly Asn
165 170 175

Gly Trp Ser Phe Val Val Trp Gly Ile Phe Ala Arg Leu Val Val Val
180 185 190

Tyr His Val Thr Trp Leu Val Asn Ser Ala Thr His Lys Phe Gly Tyr
195 200 205

Arg Ser His Glu Ser Gly Asp Gln Ser Thr Asn Cys Trp Trp Val Ala
210 215 220

Leu Leu Ala Phe Gly Glu Gly Trp His Asn Asn His His Ala Tyr Gln
225 230 235 240

Tyr Ser Ala Arg His Gly Leu Gln Trp Trp Glu Phe Asp Leu Thr Trp
245 250 255

Leu Ile Ile Cys Gly Leu Lys Lys Val Gly Leu Ala Arg Lys Ile Lys
260 265 270

Val Ala Ser Pro Asn Asn
275

<210> 3

<211> 4

<212> PRT

<213> artificial

<220>

<223> endoplasmic reticulum retention and retrieval signal sequence

<220>

<221> MOD_RES

<222> (3)..(4)

<223> Xaa is any amino acid

<400> 3

Lys Lys Xaa Xaa

1

<210> 4

<211> 4

<212> PRT

<213> artificial

<220>

<223> endoplasmic reticulum retention and retrieval signal sequence

<400> 4

Lys Asp Glu Leu

1

<210> 5

<211> 4

<212> PRT

<213> artificial

<220>

<223> endoplasmic reticulum retention and retrieval signal sequence

<400> 5

Lys Lys Ser Ser

1

<210> 6

<211> 4

<212> PRT

<213> artificial

<220>

<223> endoplasmic reticulum retention and retrieval signal sequence

<400> 6

His Asp Glu Phe

1

<210> 7

<211> 4

<212> PRT

<213> artificial

<220>

<223> endoplasmic reticulum retention and retrieval signal sequence

<400> 7

Lys Glu Glu Leu

1

<210> 8

<211> 4

<212> PRT

<213> artificial

<220>
<223> endoplasmic reticulum retention and retrieval signal sequence

<400> 8

Lys Asp Gln Leu

1

<210> 9
<211> 35
<212> DNA
<213> artificial

<220>
<223> amplification primer DSG-XhoI-5'

<400> 9
ccccctcga gatgaccctt gctatccgac ccaag 35

<210> 10
<211> 36
<212> DNA
<213> artificial

<220>
<223> amplification primer DSG-XhoI-3'

<400> 10
ccccctcga gttagttggtt tggagacgcc actttg 36

<210> 11
<211> 45
<212> DNA
<213> artificial

<220>
<223> amplification primer des9-3'-ER

<400> 11
ccccccctcg agttaagaag actttttggtt gtttggagac gccac 45

<210> 12
<211> 4
<212> PRT
<213> artificial

<220>
<223> endoplasmic reticulum retention and retrieval signal sequence

<220>
<221> MOD_RES

<222> (3)..(4)

<223> Xaa is any amino acid other than Ser

<400> 12

Lys Lys Xaa Xaa

1